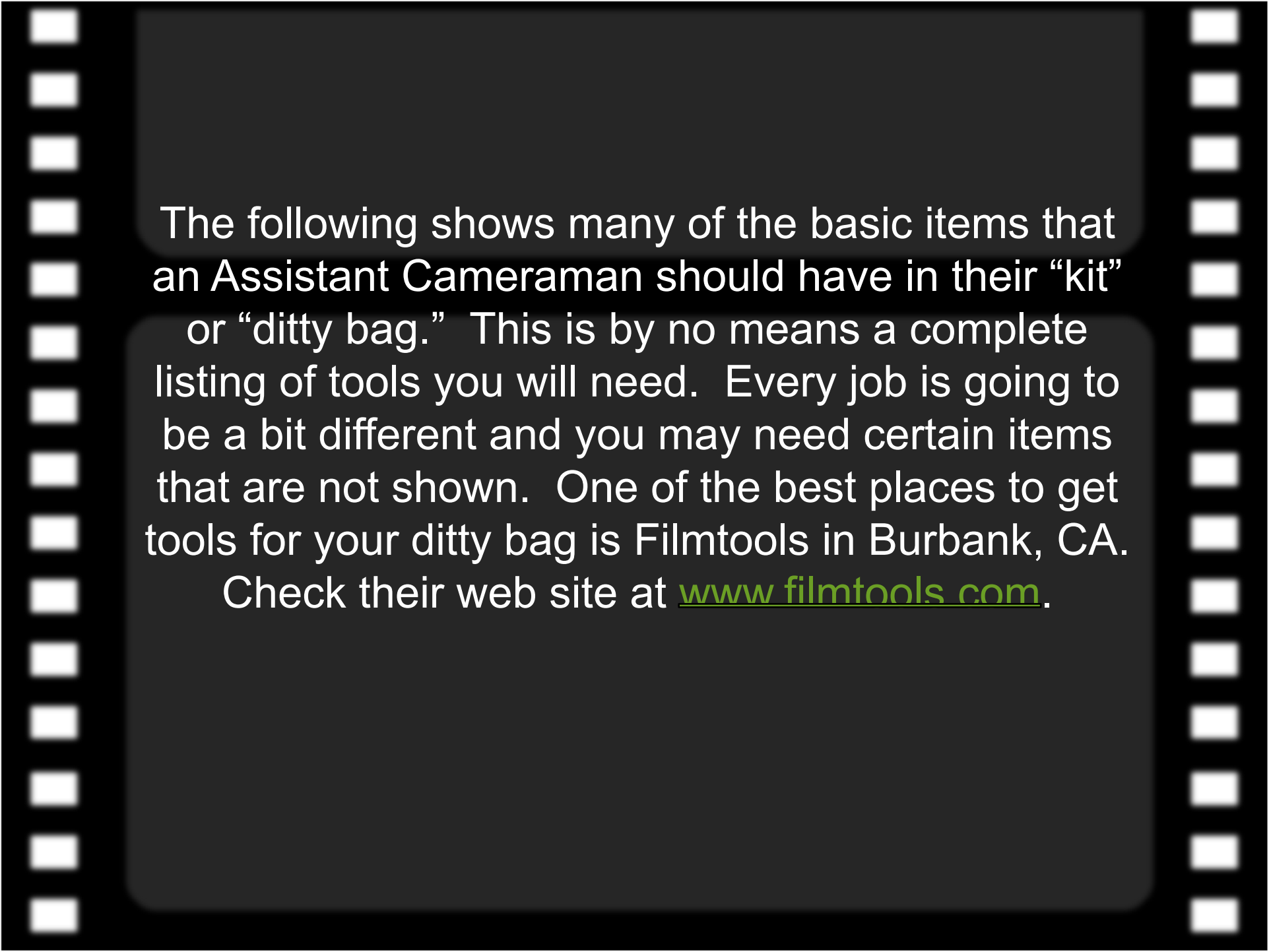




# Camera Assistant Tools & Equipment





The following shows many of the basic items that an Assistant Cameraman should have in their “kit” or “ditty bag.” This is by no means a complete listing of tools you will need. Every job is going to be a bit different and you may need certain items that are not shown. One of the best places to get tools for your ditty bag is Filmtools in Burbank, CA. Check their web site at [www.filmtools.com](http://www.filmtools.com).

## Carts, Accessory Bags & Front Box



**Magliner** – Used to transport camera equipment and accessories.



**Rubbermaid Cart**– Used to transport camera equipment and accessories.





**Canvas Tote Bag**— Used to carry various camera accessories and supplies.



**AC Ditty Bag**– Cloth or canvas bag with various compartments, used to carry AC tools and accessories.



**Front Box** – may be mounted on the gear head or fluid head for storage of key tools and accessories used regularly by the First Assistant Cameraman.



**AC Pouch & Belt**– Used by the assistant cameraman to keep tools and supplies close at hand.



# Electronic Accessories



**On-board Video Monitor**— Used by the 1<sup>st</sup> AC for critical focus or to view the framing of the shot.



**Portable GPS** – To be used when traveling to unfamiliar locations.

# Assorted Tools & General Accessories



**Metal Tape Measure** – used for measuring certain distances when the cloth/fiberglass tape measure will not work. Do not use when checking focus distances to actors.





**Cloth/Fiberglass Tape Measure** – used primarily for measuring distances to actors for following focus.



**Precision Screwdrivers** – to be used for making repairs/adjustments to camera equipment.



**Assorted Screwdrivers (Slotted & Phillips)** – to be used for making repairs/adjustments to camera equipment.



**4-in-1 Screwdriver (Top) & Stubby Screwdriver (Bottom)**  
– to be used for making repairs/adjustments to camera equipment or for mounting camera equipment to various adapter plates or surfaces.



**T-Handle Stubby Screwdriver** – to be used for attaching cameras or mounting plates to head quick release plates.





**Assorted Hex Keys (Allen Wrenches)** – to be used for making repairs/adjustments to camera equipment.



**Assorted Pliers and Cutters**— to be used for making repairs/adjustments to camera equipment.





**Vise Grips & Crescent Wrench**— to be used for making repairs/adjustments to camera equipment.



**Leatherman (Multipurpose Tool)**— to be used for making repairs/adjustments to camera equipment.



**Swiss Army Knife**— to be used for making repairs/adjustments to camera equipment.



**Razor Knife** – to be used for cutting gels, tape or other items.



**Scissors**— to be used for cutting gels, tape or other items.





**Dental Mirror** – for checking sync of shutter when adjusting shutter angle for certain shots or for checking interior of camera body for loose film chips.



**Clamp-on Jar Opener**— can be used as a simple zoom control or follow focus if you don't have those accessories, and can also be used to remove tight screw-on filters.





**Large Flashlight** – used when filming in dark locations and also for checking the gate on the camera.



**Small Flashlight with Pouch** – used when filming in dark locations and also for checking the gate on the camera.



**Lighted Magnifiers** – used for checking the gate  
on the film camera.



**Pocket Level , Bubble Level & Hot-Shoe Level** – to check that camera equipment is level before shooting.





**Inclinometer** – used to measure the angle of tilt on the Fluid Head or Gear Head. This measurement is often taken in case you may need to duplicate the shot later in production..

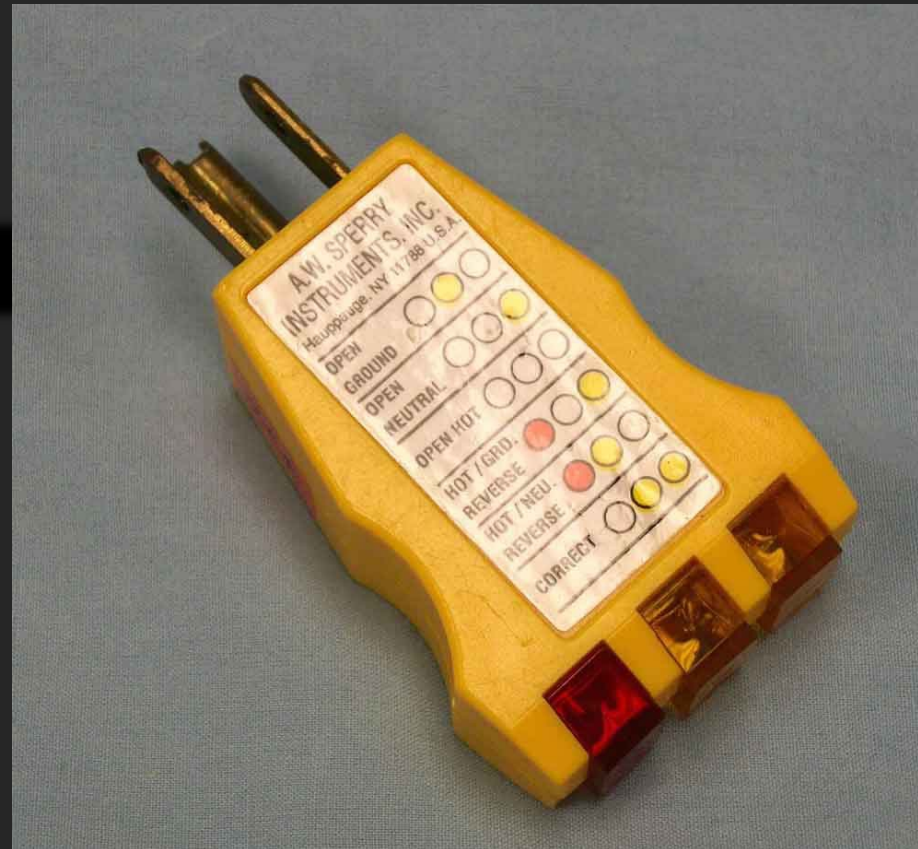


**3/8-16 & 1/4-20 Bolts** – for attaching camera to non-standard mounting platforms.



**1-in. and 2-in. brush** - for keeping exterior of camera and other equipment clean.





**Electrical Tester** – for checking the continuity of power in an AC electrical outlet.



**Electrical Adapters & Power Strip** – for charging batteries and powering any electrical device.



**Voltmeter or Multimeter** – used for checking batteries, bulbs, fuses, switches, cables, etc.

# Specialized Film Tools & Accessories

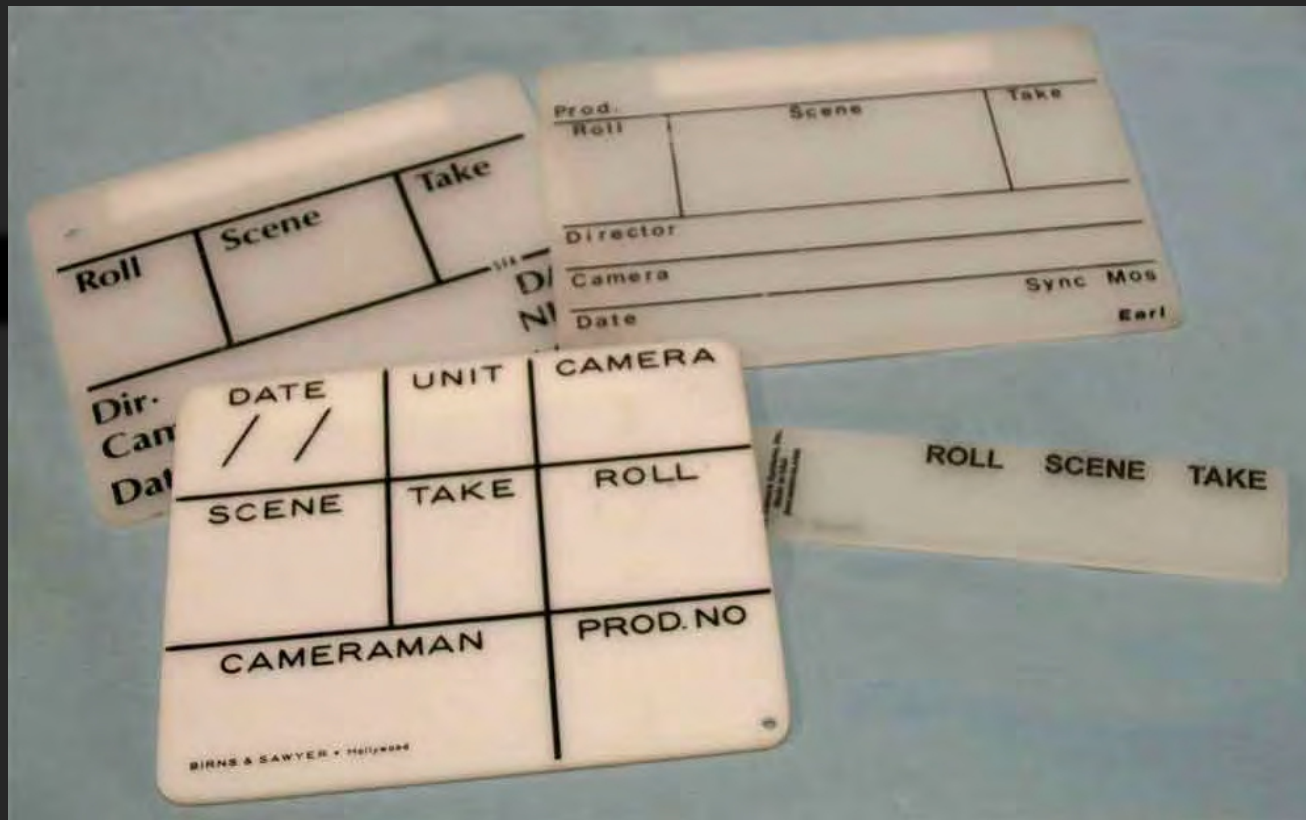


**Large Sync Slate** – to be used to identify specific information at the beginning of the shot

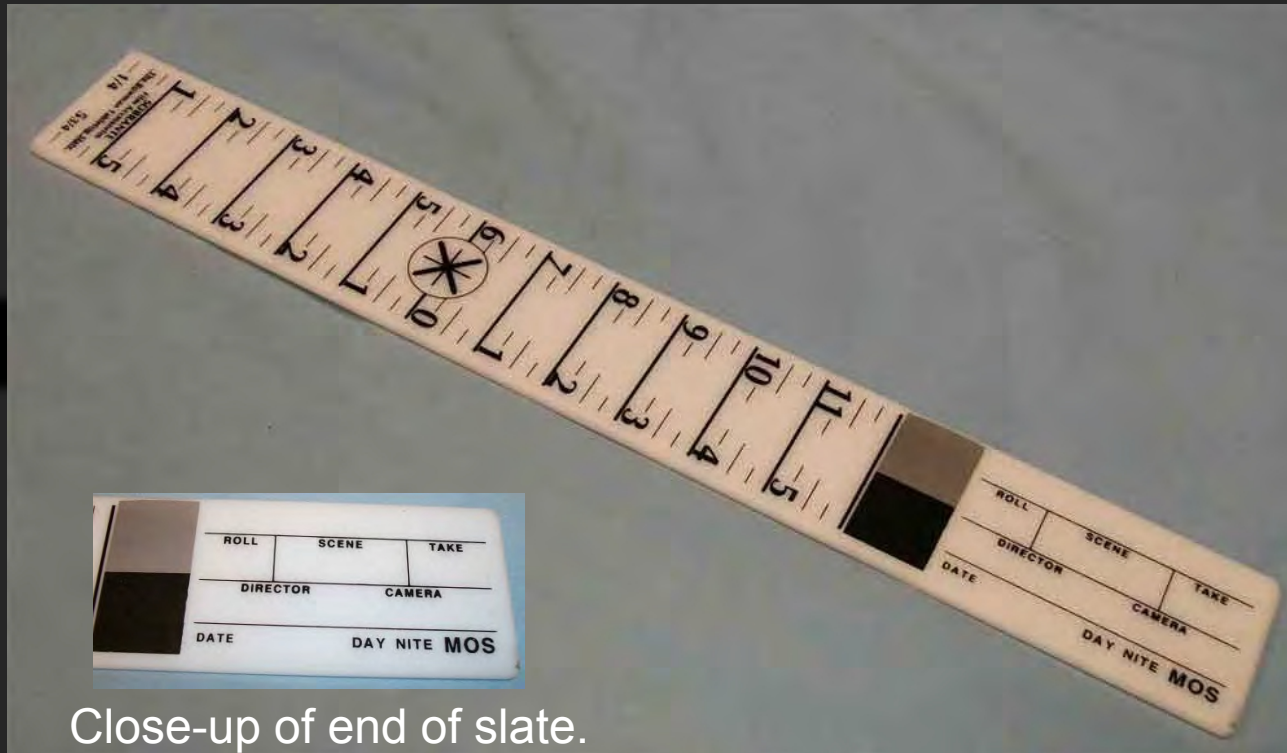


**Small & Medium Sync Slates** – to be used to identify specific information at the beginning of the shot





**Insert Slates** – to be used to identify specific information at the beginning of the shot. Used when not recording sound.



Close-up of end of slate.

**Tabletop Slate**— to be used to identify specific information at the beginning of the shot. Especially useful when shooting tabletop commercials.



**Large & Small Clapper Sticks** – for slating multiple camera shots.



**Changing Tent** – for loading/unloading of film  
when a darkroom is not available.



**French Flag with Arm** – for keeping stray light from striking the front of the lens or filters in the matte box.





**Focus Whips & Speed Crank** – extensions for the follow-focus mechanism in order to give you more control when pulling focus.



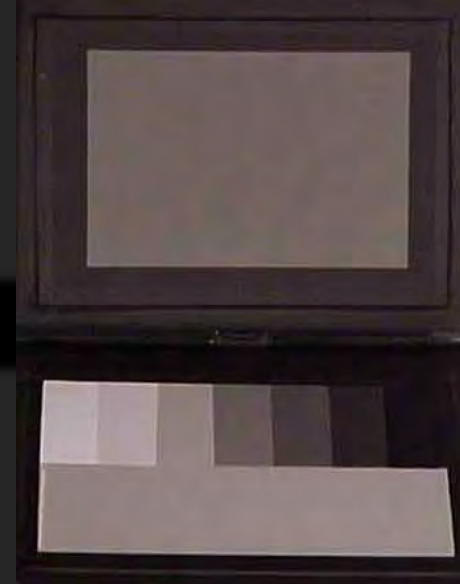
**Cardellini Clamp** – for attaching on-board monitors, on-board lights, or other objects to camera or other device.



**Noga or Ultralight Arm**— for attaching on-board monitors, on-board lights, or other objects to camera or other device.



**Terrycloth Wrist Bands** – to be used in place of foam or chamois eyepiece covers (they are washable so they can be used over and over).

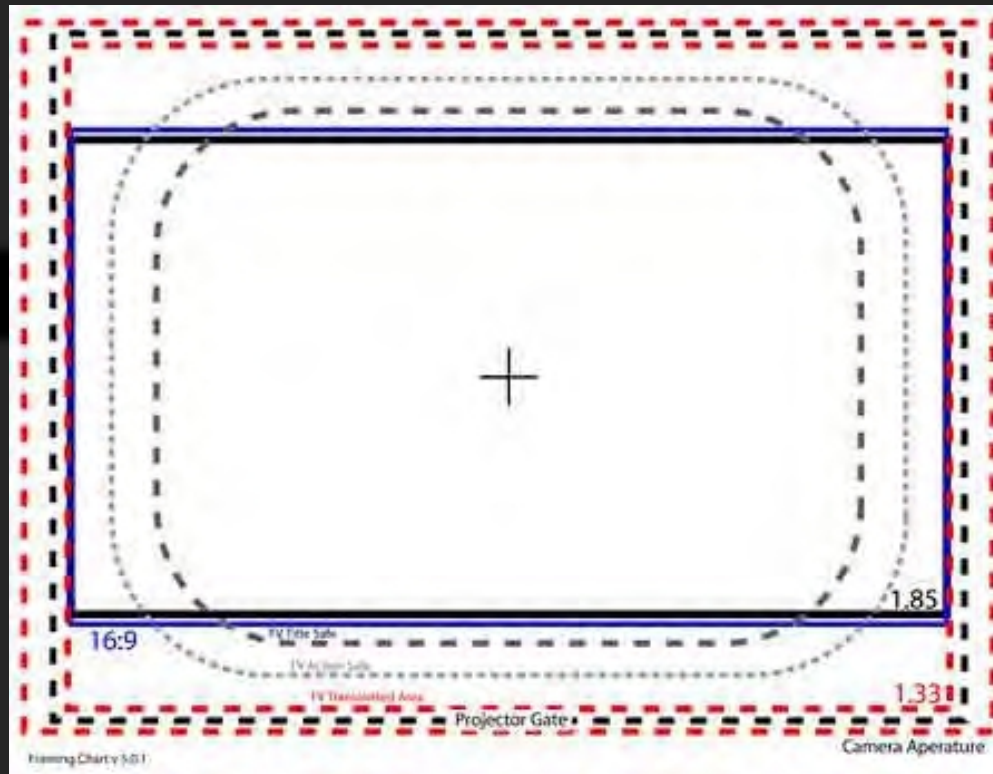


**Color Charts & Gray Scales** — used as a reference to adjust the colors from shot to shot. Usually shot at the beginning of roll for reference in postproduction.





**Focus Chart** — used as a for checking the focus of lenses during camera prep or on the set.



**Framing Chart** – used as a reference for framing each shot.  
Usually shot at the beginning of roll for reference in  
postproduction.

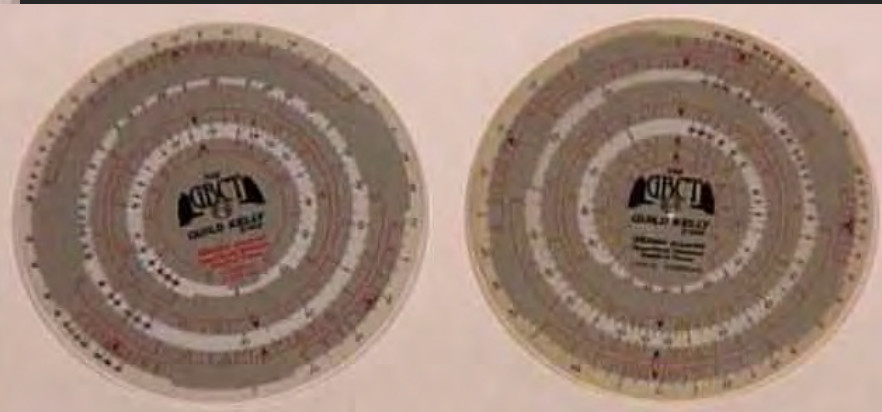


**Camera Oil**



**Liquid Silicone**

**Camera Oil & Liquid Silicone** – The oil is used to keep the camera movement or mechanism lubricated. The silicone is used to keep the pull down claw lubricated.



**Depth of Field Calculators** – for checking depth of field on critical shots.



**Shot Bag T-Marks** — used to mark actors outside or on surfaces where tape won't stick.

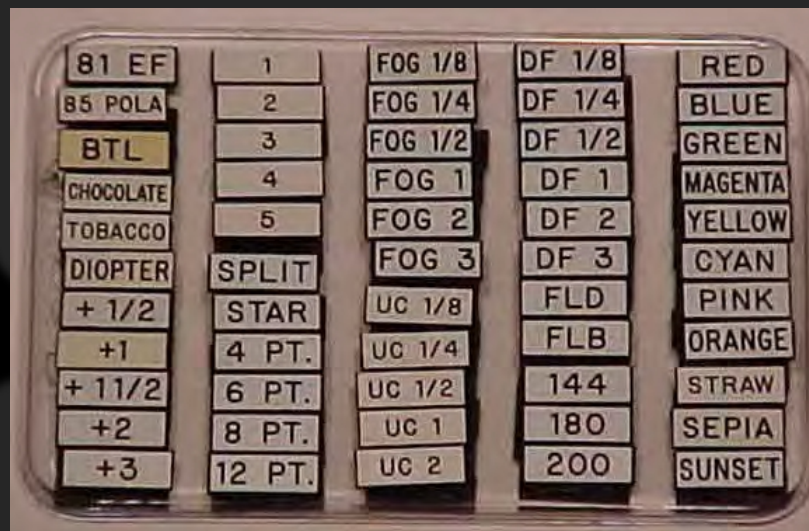




**Golf Tees**— used to mark actors outside or on surfaces where tape won't stick. They are especially useful on grassy areas because they are almost invisible to the camera.



**Space Blankets** — used for covering the camera or other equipment to protect it.



**Engraved Filter Tags** – for labeling the matte box to indicate what filters are currently in place.



**Blower Bulb Syringe** – for removing dust and dirt off lens elements and filters.



**Spring Clamps (Grip Clamps)** – for securing space blanket, camera covers or other objects.





**Bungee Cords** – for securing camera and other equipment during transport.



**Panavision Motor Cover Tool** - used to remove the motor cover from the Panavision 35mm camera. The motor cover should only be removed if you need to change the circuit boards.



**Panavision Iris Rod Wrench** - used to loosen or tighten the locks on Panavision Iris Rod Brackets.



**Ground Glass Puller (Hirschman Forceps)** – for removing ground glass from film cameras.



**Pelican Case Opener (Peli-ease)** – used to open the latches on Pelican brand equipment cases.





**Film Measuring Tool** – used to measure the length of a Short End or Dummy Roll of film.



**Loupe** – used to examine film for scratches, especially when performing the camera prep.



**Eye & Hearing Protection** – to protect your eyes from objects or substances being projected toward the camera and to protect your ears from gunshots, explosions or other loud sounds on the set.



**Video Connectors & Cables** – for connecting the video tap on the camera to the video monitor.

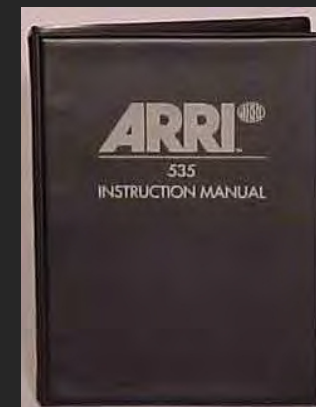
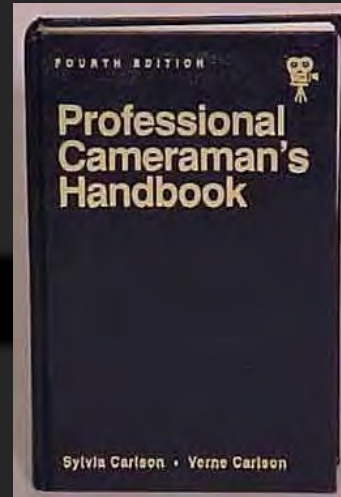
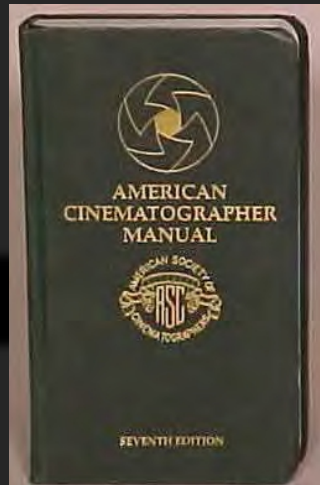


**Fingerless Gloves** – to protect hands when carrying camera or other equipment (fingerless allows the assistant to be able to follow focus or thread camera without removing the gloves).

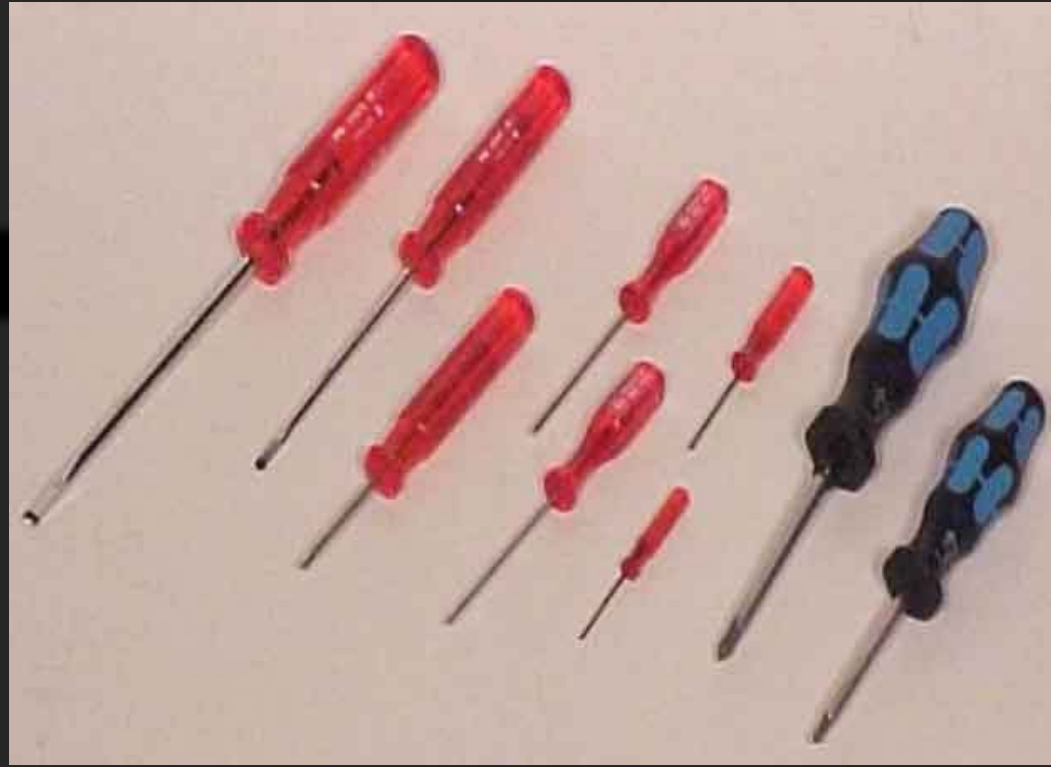




**Stop Watch** – to check the timing on the length of a scene or shot. It is most often used by the Script Supervisor but sometimes the Assistant Cameraman may need to use one.



**Various Cinematography Books or Camera Instruction Manuals - to be used as a reference**



**Special Arri Tools** – These are some of the tools you will need when making any minor repairs or adjustments on the Arriflex 16 SR2, 16 SR3, 416, 235, 435, 535, Arricam or Alexa cameras.



# Expendables



The following shows many of the key expendable items that an Assistant Cameraman should have in their “kit” or “ditty bag.” This is by no means a complete listing of expendables. Every job is going to be a bit different and you may need certain items that are not shown. One of the best places to get your expendables is Filmtools in Burbank, CA. Check their web site at [www.filmtools.com](http://www.filmtools.com). Below is a link to their Expendables Order Sheet and Checklist. Please note that this is an Excel file so be sure you have Microsoft Excel installed on your computer.

A rectangular button with a blue border. It features a small icon of a document with a green checkmark on the left. To the right of the icon, the text "Filmtools Download" is written in red, and "Expendable Supplies Order Sheet" is written in black below it.

Filmtools Download  
Expendable Supplies Order Sheet





**1-Inch Cloth Camera Tape** – used for labeling film magazines, film cans, equipment cases, etc.



**2-Inch Cloth Gaffer Tape** – used for any taping need requiring tape larger than the 1-inch camera tape.



**3/4-Inch Electrical Tape** – used for labeling film magazines, film cans, equipment cases, etc. It is often used in place of 1-inch cloth camera tape in humid conditions where the cloth tape won't stick.



**1-Inch Paper Tape** – used for marking actors.

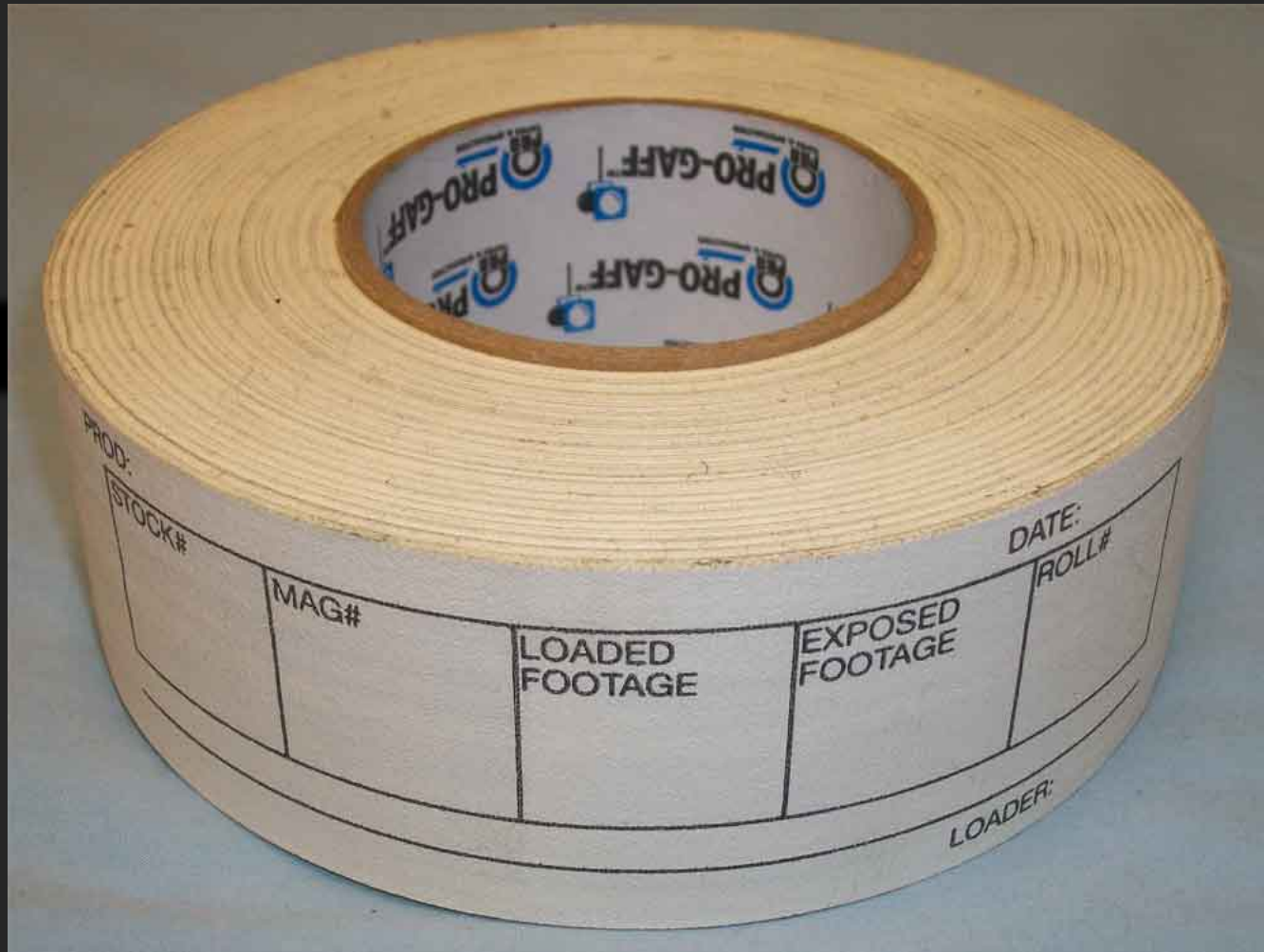


**1-Inch Fluorescent Paper Tape** – used for marking actors.





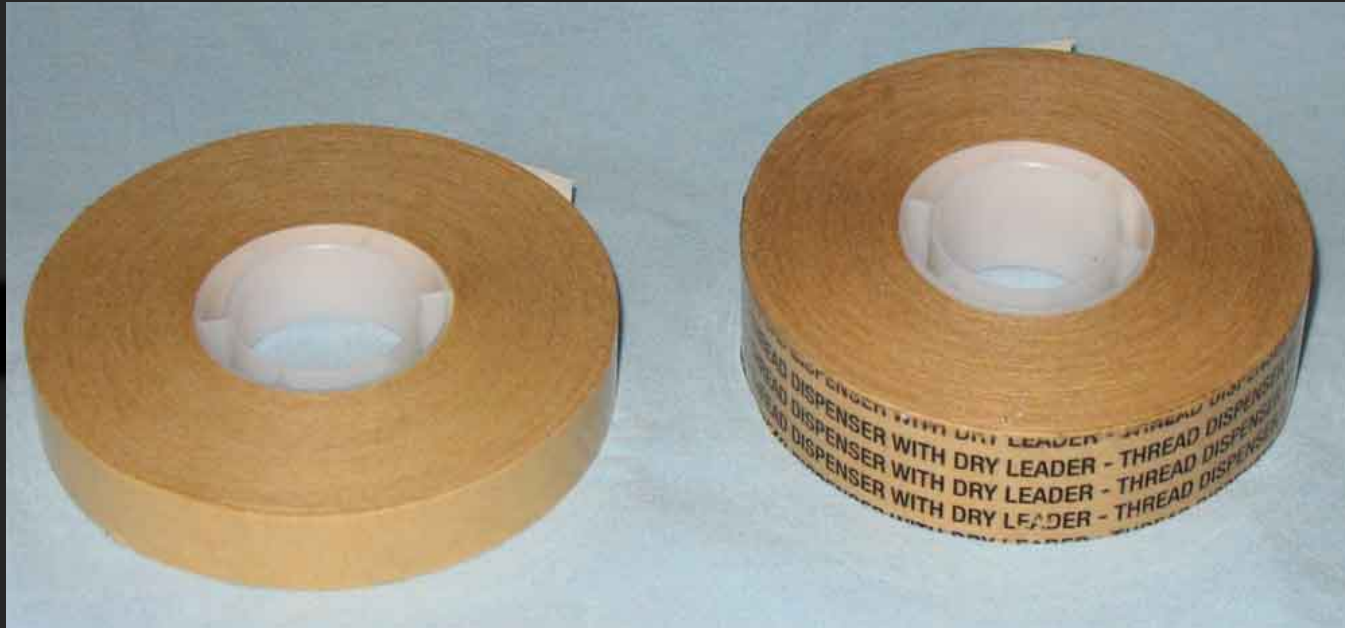
**1-Inch Fluorescent Paper Tape** – used for marking actors.



**2-Inch Camera Magazine Tape** – Special preprinted tape used for labeling film magazines and films cans.



**Tape Lanyard** – Used to keep multiple rolls of tape together for ease of use.



**Transfer Tape (Snot Tape)**– Special tape used for attaching gels or nets to the back of lenses.





**Batteries** – Used to supply power to any device using batteries, such as flashlights, magnifiers, light meters, etc.





**Permanent Markers** – Used for writing magazine labels, film can labels and any other writing or labeling need.



**Erasable Slate Markers** – Used for writing key information such as Roll, Scene & Take Numbers on the acrylic slate.



**Makeup Powder Puffs** – Used along with erasable slate markers to erase information from the slate.





**Stick on Letters** – Used for labeling the slate with the pertinent production information.



**Stabilo Erasable Pencils** – Used for placing focus marks on lenses or on on follow focus marking disk.





**Kodak Wratten Gels** – Special optically correct gel filters used for behind the lens filtration.



**Pancro Lens Cleaner** – Used along with lens tissue to clean lenses or filters.



**Rosco Lens Cleaner & Tissue** – Used for cleaning lenses and filters.



**Kimwipes Tissues** – Used for cleaning filters or other equipment. Not recommended for lenses.



**Mikros Cleaning Cloth** – Microfiber cleaning cloth used for cleaning lenses and filters.

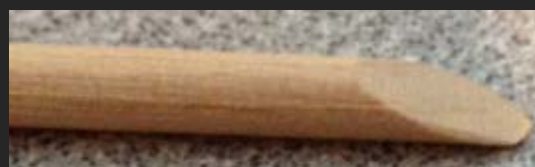
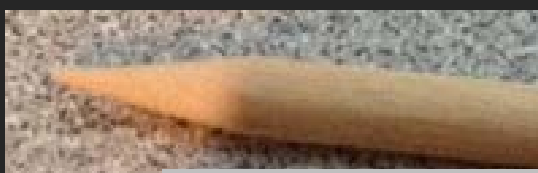




**Compressed Air** – Used to clean dirt/dust from lenses, filters or other camera equipment.



**WD-40 or Silicone Spray** – Use to lubricate sticky tripod legs or for any other lubrication purpose. Not to be used on the interior or exterior of any camera.



Close-up of Ends of Orangewood Sticks

**Orangewood Sticks** – Used to clean emulsion build-up from the gate and aperture plate.



**Cotton Tipped Swabs (Q-Tips)** – Used to clean excess oil or silicone from the camera movement and/or pull down claw.





**Foam Tipped Swabs** – Used to clean excess oil or silicone from the camera movement and/or pull down claw. May also be used to clean the sensor on a digital camera.

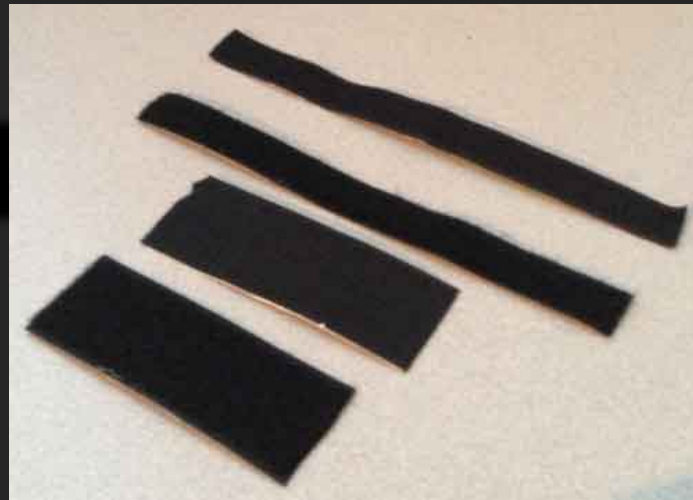




**Rip-Tie Cable Ties** – Used for securing cables such as power cables, video cables, etc.



**Bongo Ties** – Used for securing cables such as power cables, video cables, etc.



**Velcro** – Used to attach filter tags to matte boxes. May also be used to secure two items together.



**Plastic Cable Ties** – Used for securing cables such as power cables, video cables, etc.



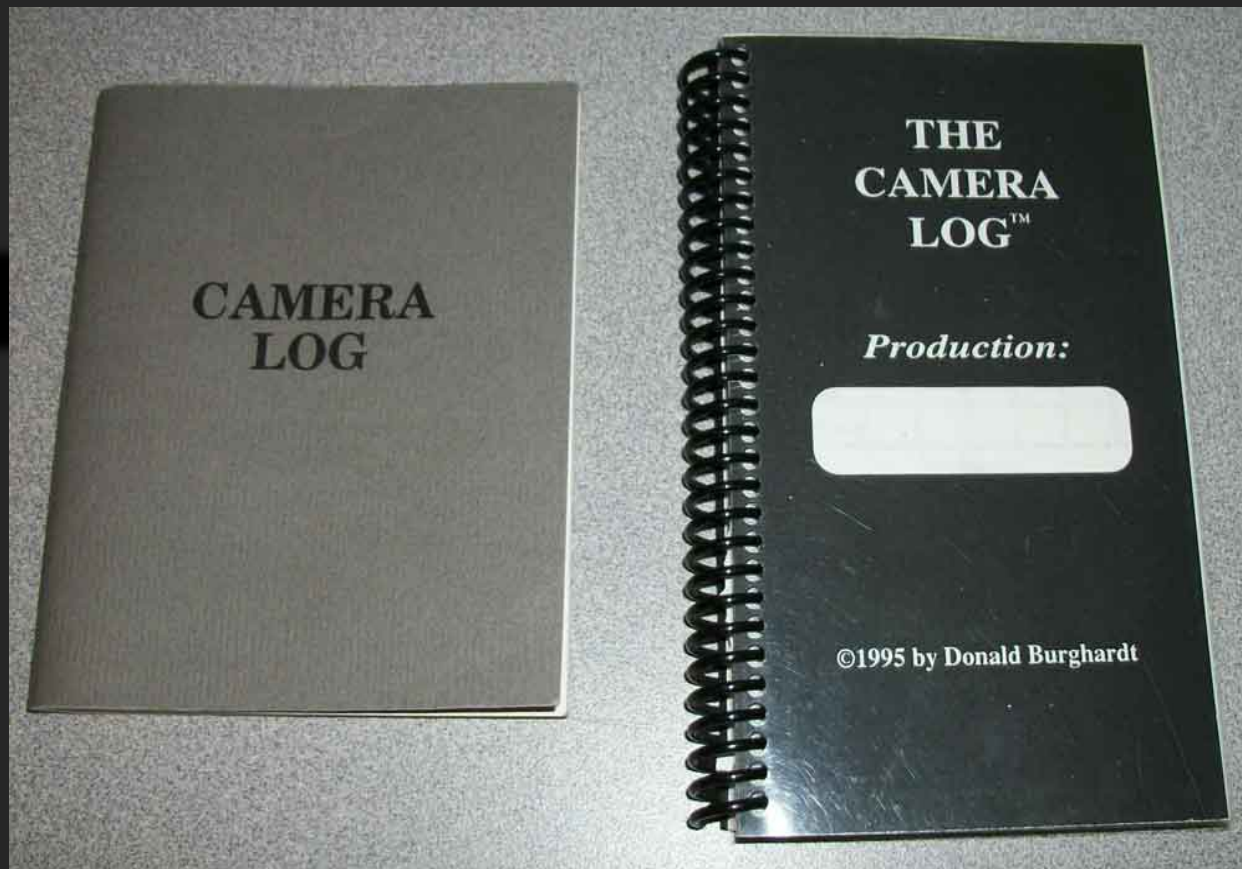


**Camera Wedges** – Small wooden wedges used for leveling the camera on uneven surfaces.





**Eyepiece Chamois** – Used on viewfinder eyepiece as a comfortable cushion for the Camera Operator.



**Camera Log Book** – Used to record specific shot information such as lens focal length, focus distance, aperture, etc.

[illegible]

Let's start by looking at what I call the heading of the report.

Laboratory:	<input type="text"/>	Page #	<input type="text"/>	of	<input type="text"/>
Prod. Co.:	<input type="text"/>				
Prod. Title:	<input type="text"/>				
Director:	<input type="text"/>	D.P.:	<input type="text"/>		
1 <sup>st</sup> AC:	<input type="text"/>	2 <sup>nd</sup> AC:	<input type="text"/>	Loader:	<input type="text"/>
Date:	<input type="text"/>	Prod. #:	<input type="text"/>	Camera:	<input type="text"/>
Mag #:	<input type="text"/>	Roll #:	<input type="text"/>	Footage:	<input type="text"/>
Film Type:	<input type="text"/>	Emulsion #:	<input type="text"/>		

- **Laboratory:** – The name of the lab that will process the film.
- **Prod. Co:** - The name of the company producing the film.
- **Prod. Title:** - The title of the film or production.
- **Director:** -First Initial and Last Name of Director.
- **D.P.:** - First Initial and Last Name of Cinematographer.
- **1<sup>st</sup> AC:** - First Initial and Last Name of First Assistant Cameraman.
- **2<sup>nd</sup> AC:** - First Initial and Last Name of Second Assistant Cameraman.

## Continuing with the heading part of the report.

Date:		Prod. #:		Camera:	
Mag #:		Roll #:		Footage:	
Film Type:		Emulsion #:			

- **Date:** - The date that the roll of film is shot.
- **Prod. #:** - The number of the production as assigned by the Production Company.
- **Camera:** - The serial number of the camera being used.
- **Mag #:** - The serial number for the magazine in which the film is loaded.
- **Roll #:** - The number of the roll as it is placed on the camera.
- **Footage:** - The size of the roll loaded into the magazine.
- **Film Type:** - The first four numbers from the film stock ID information – 5203, 5207, 7203, 7219, etc.
- **Emulsion #:** - The last numbers from the film stock ID information - 032-1902, 197-1102, 271-5846, etc.



Now let's look at what I call the shooting part of the camera report.

[illegible]

SCENE	TAKE	DIAL	FEET	LENS	T-STOP	REMARKS
-------	------	------	------	------	--------	---------

- **Scene:** - The number of the scene as it appears in the script.
- **Take:** - The number of the attempt to shoot the scene in order to get one or more useable shots.
- **Dial:** - The footage amount from the camera footage counter, rounded to the nearest ten (10).
- **Feet:** - The total feet for the individual take. It is determined by subtracting the previous Dial number from the current Dial number.
- **Lens:** - The focal length of the lens used to shoot the take.
- **T-Stop:** - The exposure set on the lens for the shot.
- **Remarks:** - Any additional information that the cinematographer or first assistant wants to be included on the camera report. It may include filters used, distance to subject, height of camera lens, MOS, tail slate, just to name a few.

Using the camera footage counter numbers that follow let's see how the camera report would be completed. This information is from Figure 4.7 on page 95 of The Camera Assistant's Manual, 6<sup>th</sup> Edition.



At the end of the first take, (Scene 54, Take 1) the camera footage counter indicated 66 feet.

To make the math easier, you should round all camera footage counter amounts to the nearest ten (10). In this case we round 66 to 70 and write 70 in the DIAL column of the report for Scene 54, Take 1. Since it is the first take on the report, the FEET amount would also be 70.




At the end of the second take, (Scene 54, Take 2) the camera footage counter indicated 121 feet.

We round 121 to 120 and write 120 in the DIAL column of the report for Scene 54, Take 2. We now subtract the previous DIAL amount from the current DIAL amount to determine the current FEET amount.  $120 - 70 = 50$

SCENE	TAKE	DIAL	FEET	LENS	F-STOP	REMARKS
54	1	70	70			



At the end of the next take, (Scene 54, Take 3) the camera footage counter indicated 162 feet.

Round 162 to 160 and write 160 in the DIAL column of the report for Scene 54, Take 3. Next do the subtraction,  $160 - 120 = 40$  to determine the FEET for Scene 54, Take 3.

SCENE	TAKE	DIAL	FEET	LENS	F-STOP	REMARKS
54	1	70	70			
	2	120	50			





At the end of the next take, (Scene 54, Take 4) the camera footage counter indicated 205 feet.

Round 205 to 210 and write 210 in the DIAL column of the report for Scene 54, Take 4. Next do the subtraction,  $210 - 160 = 50$  to determine the FEET for Scene 54, Take 4.

SCENE	TAKE	DIAL	FEET	LENS	F-STOP	REMARKS
54	1	70	70			
	2	120	50			
	3	160	40			
	4	210	50			



At the end of the next take, (Scene 54A, Take 1) the camera footage counter indicated 247 feet.

Round 247 to 250 and write 250 in the DIAL column of the report for Scene 54A, Take 1. Next do the subtraction,  $250 - 210 = 40$  to determine the FEET for Scene 54A, Take 1.

SCENE	TAKE	DIAL	FEET	LENS	F-STOP	REMARKS
54	1	70	70			
	2	120	50			
	3	160	40			
	4	210	50			
54A	1	250	40			



At the end of the next take, (Scene 54A, Take 2) the camera footage counter indicated 279 feet.

Round 279 to 280 and write 280 in the DIAL column of the report for Scene 54A, Take 2. Next do the subtraction,  $280 - 250 = 30$  to determine the FEET for Scene 54A, Take 2.


SCENE	TAKE	DIAL	FEET	LENS	F-STOP	REMARKS
54	1	70	70			
	2	120	50			
	3	160	40			
	4	210	50			
54A	1	250	40			
	2	280	30			



At the end of the next take, (Scene 82, Take 12) the camera footage counter indicated 364 feet.

Round 364 to 360 and write 360 in the DIAL column of the report for Scene 82, Take 1. Next do the subtraction,  $360 - 280 = 80$  to determine the FEET for Scene 82, Take 1.

SCENE	TAKE	DIAL	FEET	LENS	F-STOP	REMARKS
54	1	70	70			
	2	120	50			
	3	160	40			
	4	210	50			
54A	1	250	40			
	2	280	30			
82	1	360	80			

Co. Submitted By: <b>Demi Monde Productions</b> P.O.#:					<b>CAMERA REPORT</b>						
Bill To: <b>Demi Monde Productions</b>				Date Exposed:		Phone Contact:					
Picture Title: <b>Claire of the Moon</b>				Loader:							
Director: <b>N. Conn</b>				D.P.: <b>R. Sellers</b>		Sheet of					
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <b>ROLL # 5</b>    <input type="checkbox"/> BLACK &amp; WHITE    <input checked="" type="checkbox"/> COLOR  <b>EMUL # 5218</b>    — 237 4862    <b>MAG # 10146</b>  <b>DEVELOP</b>    FOOTAGE 1,000  <input checked="" type="checkbox"/> NORMAL    <input type="checkbox"/> PUSH    STOP(S)    <input type="checkbox"/> PULL    STOP(S)  <b>FILM WORKPRINT</b>    <input type="checkbox"/> PRINT ALL    <input checked="" type="checkbox"/> PRINT CIRCLED TAKES  <b>VIDEO PREP &amp; TRANSFER</b>    <input type="checkbox"/> TRANSFER ALL    <input checked="" type="checkbox"/> TRANSFER CIRCLED TAKES  <b>TRANSFER AT</b>    ips    <input type="checkbox"/> EDGE # PUNCH </div> <div style="width: 50%; text-align: center;">   <b>FOTO-KEM INDUSTRIES, INC.</b>  2801 W. Alameda Ave. • Burbank CA 91505  818 848 3101 Voice Mail  Production Services Fax 818 841 7532  Customer Services Fax 818 841 0630 </div> </div>											
SCENE NO.	TAKE	DIAL	FEET	SD	REMARKS	SCENE NO.	TAKE	DIAL	FEET	SD	REMARKS
<b>54</b>	<b>1</b>	<b>70</b>	<b>70</b>			<b>82 A</b>	<b>(2)</b>	<b>700</b>	<b>(50)</b>		
	<b>(2)</b>	<b>120</b>	<b>(50)</b>				<b>(3)</b>	<b>750</b>	<b>(50)</b>		
	<b>3</b>	<b>160</b>	<b>40</b>			<b>82 B</b>	<b>(1)</b>	<b>800</b>	<b>(50)</b>		
<b>(4)</b>	<b>210</b>	<b>(50)</b>			<b>2</b>		<b>840</b>	<b>40</b>			
<b>54 A</b>	<b>(1)</b>	<b>250</b>	<b>(40)</b>			<b>36</b>	<b>(1)</b>	<b>890</b>	<b>(50)</b>		
	<b>2</b>	<b>280</b>	<b>30</b>				<b>(2)</b>	<b>940</b>	<b>(50)</b>		
<b>82</b>	<b>(1)</b>	<b>360</b>	<b>(80)</b>				<b>3</b>	<b>970</b>	<b>30</b>		
	<b>2</b>	<b>430</b>	<b>70</b>			<div style="border: 1px solid black; width: 100%; height: 100%; transform: rotate(45deg);"></div>					
	<b>(3)</b>	<b>500</b>	<b>(70)</b>								
	<b>4</b>	<b>550</b>	<b>50</b>			<b>Out At 970'</b> <span style="float: right;">G    <b>600</b></span>					
	<b>(5)</b>	<b>610</b>	<b>(60)</b>			<b>Develop Normal</b> <span style="float: right;">NG    <b>370</b></span>					
<b>82 A</b>	<b>1</b>	<b>650</b>	<b>40</b>			<b>Prep for Video Transfer</b> <span style="float: right;">W    <b>30</b></span>					
						<span style="float: right;">T    <b>1,000</b></span>					

2050-60 (9/00)
THIS CAMERA REPORT SUBJECT TO PROVISIONS ON THE REVERSE SIDE

**OPEN 24 HOURS A DAY, 7 DAYS A WEEK**



Once the amounts for all SCENES and TAKES have been entered and the math has been complete, you need to calculate the amounts for GOOD, NO GOOD, WASTE, SHORT END AND TOTALS. The TAKES that the directors likes , which will be considered for use in the finished film, are called the GOOD TAKES and should be circled. The TAKE number and FEET amount should be circled. All the circled TAKES are added and this total is written in the space labeled GOOD (G).

SCENE NO.	TAKE	DIAL	FEET	SD	REMARKS	SCENE NO.	TAKE	DIAL	FEET	SD	REMARKS
54	1	70	70			82 A	(2)	700	(50)		
	(2)	120	(50)				(3)	750	(50)		
	3	160	40			82 B	(1)	800	(50)		
	(4)	210	(50)				2	840	40		
54 A	(1)	250	(40)			36	(1)	890	(50)		
	2	280	30				(2)	940	(50)		
82	(1)	360	(80)				3	970	30		
	2	430	70								
	(3)	500	(70)								
	4	550	50			Out At 970'				G	600
	(5)	610	(60)			Develop Normal				NG	370
82 A	1	650	40			Prep for Video Transfer				W	30
										T	1,000

Next you should add all the FEET amounts that have not been circled and write this total in the space labeled NO GOOD (NG).

SCENE NO.	TAKE	DIAL	FEET	SD	REMARKS	SCENE NO.	TAKE	DIAL	FEET	SD	REMARKS
54	1	70	70			82 A	②	700	⑤0		
	②	120	⑤0				③	750	⑤0		
	3	160	40			82 B	①	800	⑤0		
	④	210	⑤0				2	840	40		
54 A	①	250	④0			36	①	890	⑤0		
	2	280	30				②	940	⑤0		
82	①	360	⑧0				3	970	30		
	2	430	70								
	③	500	⑦0			Out At 970'				G	600
	4	550	50			Develop Normal				NG	370
	⑤	610	⑥0			Prep for Video Transfer				W	30
82 A	1	650	40							T	1,000

2050-60 (9/00) THIS CAMERA REPORT SUBJECT TO PROVISIONS ON THE REVERSE SIDE  
OPEN 24 HOURS A DAY, 7 DAYS A WEEK

Add the amount for GOOD plus the amount for NO GOOD and then subtract this total from the total amount of footage loaded in the magazine. In this case it would be  $1000 - 970 = 30$ . For 35mm if this amount is less than 100 feet it would be considered WASTE, and if it is more than 100 feet it would be considered a SHORT END. Short Ends are saved to be used for shooting at a later date. The cutoff amount for WASTE and SHORT END when shooting 16mm film is 40 feet.

SCENE NO.	TAKE	DIAL	FEET	SD	REMARKS	SCENE NO.	TAKE	DIAL	FEET	SD	REMARKS
54	1	70	70			82 A	(2)	700	(50)		
	(2)	120	(50)				(3)	750	(50)		
	3	160	40			82 B	(1)	800	(50)		
	(4)	210	(50)				2	840	40		
54 A	(1)	250	(40)			36	(1)	890	(50)		
	2	280	30				(2)	940	(50)		
82	(1)	360	(80)				3	970	30		
	2	430	70								
	(3)	500	(70)								
	4	550	50			Out At 970'				G	600
	(5)	610	(60)			Develop Normal				NG	370
82 A	1	650	40			Prep for Video Transfer				W	30
										T	1,000